



General

Guideline Title

Best evidence statement (BEST). Horticultural therapy for children and adolescents in residential treatment for mental health.

Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BEST). Horticultural therapy for children and adolescents in residential treatment for mental health. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2013 Feb 19. 5 p. [5 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The strength of the recommendation (strongly recommended, recommended, or no recommendation) and the quality of the evidence (1a to 5b) are defined at the end of the "Major Recommendations" field.

1. It is recommended that horticultural therapy be provided for children and adolescents with mental health diagnosis to decrease depression (Gonzalez et al., 2011 [3b]; Gonzalez et al., 2010 [4a]; Cassidy, 1996 [4b]) and increase self-esteem (Local Consensus [5]).
2. There is insufficient evidence to make a recommendation regarding the effects of horticultural therapy on aggression in children with mental health diagnosis.

Note: Horticulture Therapy does not change or decrease active aggressive episodes. Children display fewer aggressive episodes while in horticulture therapy.

Definitions:

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline

Quality Level	Local Consensus Definition

†a = good quality study; b = lesser quality study

Table of Recommendation Strength

Strength	Definition
It is strongly recommended that... It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens. (or visa-versa for negative recommendations)
It is recommended that... It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Mental health disorders

Guideline Category

Management

Treatment

Clinical Specialty

Family Practice

Internal Medicine

Pediatrics

Psychiatry

Psychology

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Guideline Objective(s)

To evaluate, among children and adolescents ages 8-18 years with mental health diagnosis, if participation in horticultural therapy compared to no participation in horticultural therapy decreases aggression and depression and increases self-esteem

Target Population

Children and adolescents, 8-18 years of age who are diagnosed with a mental health disorder; in residential treatment at a mental health facility

Note: Children and adolescent, 8-18 years of age in residential treatment at a mental health facility; who do not meet established criteria for on grounds activities are excluded from these recommendations.

Interventions and Practices Considered

Horticultural therapy

Note: The American Horticultural Therapy Association (AHTA) defines Horticultural Therapy as the engagement of a client in horticultural activities facilitated by a trained therapist to achieve specific and documented treatment goals.

Major Outcomes Considered

- Aggression and aggressive episodes
- Depression
- Self-esteem
- Patient and family satisfaction

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Search Strategy

- Databases: Medline, PubMed, CINAHL, PsycInfo, Cochrane Library
- Search Terms: Depression, Horticultural Therapy, Mental Health, Psychiatry, horticulture, children, residential treatment, long-term, mental health treatment, activities, self-esteem, aggression, leisure activities and gardening.
- Limits, Filters, Search Dates: 1987-2012 English
- Date last search done: August 17, 2012

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Table of Recommendation Strength

Strength	Definition
It is strongly recommended that... It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens. (or visa-versa for negative recommendations)
It is recommended	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits

Strength	Definition
It is recommended that... not...	are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

This Best Evidence Statement has been reviewed against quality criteria by two independent reviewers from the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence Collaboration.

Evidence Supporting the Recommendations

References Supporting the Recommendations

Cassidy T. All work and no play: a focus on leisure time as a means for promoting health. *Council Psychol Q*. 1996;9(1):77-90.

Gonzalez MT, Hartig T, Patil GG, Martinsen EW, Kirkevold M. A prospective study of group cohesiveness in therapeutic horticulture for clinical depression. *Int J Ment Health Nurs*. 2011 Apr;20(2):119-29. [PubMed](#)

Gonzalez MT, Hartig T, Patil GG, Martinsen EW, Kirkevold M. Therapeutic horticulture in clinical depression: a prospective study of active components. *J Adv Nurs*. 2010 Sep;66(9):2002-13. [PubMed](#)

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Decrease aggression and depression
- Increase self-esteem

Potential Harms

Qualifying Statements

Qualifying Statements

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Implementation of the Guideline

Description of Implementation Strategy

Applicability Issues

- There are potential safety concerns when engaging in outside activities with children and adolescents in residential treatment. Client's history of high risk behavior and risk of elopement should be assessed prior to participation.
- An important element in this process is properly identifying clients for outside activities by utilizing residential psychiatry resources, such as an On Grounds Activity Planning Decision Tree.
- A formalized procedure should be used to evaluate client's interest, attitude, conflicting behaviors, aggression and mental status, such as an Elopement Risk Assessment.
- Client and staff safety should be considered by providing adequate staffing in accordance to client needs and risk assessment.
- Weather can also be a factor for outside activities.
- Available resources and supplies can also be a barrier for effective horticultural therapy programs, such as inadequate gardening and activity materials and space. Adequate supplies aid in fascination and enhance clients' interest, which may increase their attention to task and eliminate distractive behaviors.
- Horticultural Therapy can be a labor and cost intense program, funding may be an issue. Development and continuation maybe funded by donations and or grant funding.

Implementation Tools

Audit Criteria/Indicators

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Feb 19

Guideline Developer(s)

Cincinnati Children's Hospital Medical Center - Hospital/Medical Center

Source(s) of Funding

Cincinnati Children's Hospital Medical Center

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Conflict of interest declaration forms are filed with the Cincinnati Children's Hospital Medical Center Evidence-based Decision Making (CCHMC

EBDM) group. No financial or intellectual conflicts of interest were found.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

Availability of Companion Documents

The following are available:

- Judging the strength of a recommendation. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .
- Grading a body of evidence to answer a clinical question. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .
- Table of evidence levels. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2009 May 7. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .

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In addition, suggested process or outcome measures are available in the [original guideline document](#) .

Patient Resources

None available

NGC Status

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